

Amendments to the Claims:

Please cancel claims 1-7 and 12-15, and add new claims 16-19 as follows. The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-15 (cancelled)

16. (New) A laser scanning microscope comprising:
a pulse laser unit configured to oscillate a pulse laser beam to excite a sample;
a scanning mirror configured to scan the pulse laser beam;
a photodetector configured to detect light from the sample and output an analog detection signal;

a sampling control circuit which receives a pulse oscillation signal from the pulse laser unit and generates a trigger signal delayed by a predetermined time;

a pulse generator which receives the trigger signal and generates a plurality of sampling pulse signals for each trigger signal;

an A/D converter which converts the analog detection signal from the photodetector to digital data in synchronism with each of the sampling pulse signals; and

a memory which stores the digital data provided by the A/D converter.

17. (New) The laser scanning microscope according to claim 16, wherein digital integration of a fluorescent signal is performed using the digital data stored in the memory.

18. (New) The laser scanning microscope according to claim 16, wherein analysis is performed to detect a peak of a fluorescent signal using the digital data stored in the memory.

19. (New) The laser scanning microscope according to claim 16, wherein analysis is performed to determine a time constant of a fluorescent signal using the digital data stored in the memory.